

AMENDMENTS TO THE CLAIMS:

The following claim listing replaces all previous claim listings in this application:

1.-14. (Canceled)

15. (Previously Presented) The device of Claim 17, wherein the device is configured to permit advancement of a conduit to be placed between a heart chamber and a coronary vessel.

16. (Previously Presented) The device of Claim 17, wherein the first lumen extending at least partially through the elongate tubular body is a side lumen.

17. (Previously Presented) A device for measuring a depth of insertion into a heart, comprising:

an elongate tubular body having a distal end configured for insertion into the heart, a proximal end, a first lumen extending at least partially therethrough, and a second lumen adjacent the first lumen, the second lumen being configured to receive a conduit to be placed between a heart chamber and a coronary vessel;

an access port near the distal end of the elongate tubular body;

an opening near the proximal end in flow communication with the access port;

and

at least one depth indication mechanism visible from the outside of the tubular body for indicating a depth of insertion of the device,

wherein the device is configured so that when the device is inserted into the heart and reaches a blood-containing portion of the heart, blood flows through the access port and the opening and the depth indication mechanism indicates the depth of insertion of the device.

18.-46. (Canceled)

47. (Original) A conduit for providing a passageway of blood between a chamber of the heart and an adjacent blood vessel through a heart wall, comprising:

an elongate body having a proximal end and a distal end and a lumen extending therethrough; and

threads extending around the outside of the elongate body to secure the body to the heart wall.

48. (Original) A device for insertion into the heart wall of a patient, comprising an elongate body having threads to be screwed into the heart wall.

49.-51. (Canceled)

52. (Previously Presented) The device of claim 17, wherein the first lumen and the second lumen are side-by-side.

53. (Previously Presented) The device of claim 17, wherein the indication mechanism includes markers.

54. (Previously Presented) The device of claim 53, wherein the markers are configured so as to determine a size of a conduit configured to be implanted in the heart.

55. (Previously Presented) The device of claim 17, wherein the coronary vessel is a coronary artery.

56. (Previously Presented) The device of claim 17, wherein the blood-containing portion is the heart chamber.

57. (Previously Presented) A device for delivering a conduit to a heart wall, the device comprising:

an elongate tubular body having a distal end configured for insertion into the heart wall, a proximal end, and a lumen extending at least partially therethrough;

an access port near the distal end of the elongate tubular body;

an portion of the member near the proximal end in flow communication with the access port, the portion permitting observation of blood flow; and

at least one depth indication mechanism visible from the outside of the tubular body for indicating a depth of insertion of the device,

wherein the device is configured so that when the device is inserted into the heart and reaches a blood-containing portion of the heart, blood flows through the access port and to the portion, and the depth indication mechanism indicates the depth of insertion of the device, and

wherein the device is further configured to permit advancement of the conduit to be placed in the heart wall.

58. (Previously Presented) The device of claim 57, wherein the device is configured to permit advancement of the conduit to be placed in a heart wall between a heart chamber and a coronary vessel.

59. (Previously Presented) The device of claim 58, wherein the coronary vessel is a coronary artery.

60. (Previously Presented) The device of claim 57, wherein the lumen extending at least partially through the elongate tubular body includes a side lumen.

61. (Previously Presented) The device of claim 57, further comprising a second lumen located adjacent the lumen extending at least partially through the elongate body, the second lumen being configured to receive the conduit to be placed in a heart wall between a heart chamber and a coronary artery.

62. (Previously Presented) The device of claim 57, wherein the portion of the member includes a window.

63. (Previously Presented) The device of claim 57, wherein the portion of the member includes an opening.

64. (Previously Presented) A conduit for providing a passageway of blood through a heart wall between a chamber of the heart and an adjacent blood vessel, comprising:

an elongate body having an open proximal end and an open distal end and a lumen extending therethrough; and

threads extending around at least a portion of the outside of the elongate body.

65. (Previously Presented) The conduit of claim 64, wherein the threads extend around a majority of the outside of the elongate body.

66. (Previously Presented) The conduit of claim 64, wherein a proximal tip of the elongate body is unthreaded.

67. (Previously Presented) The conduit of claim 64, further comprising a flange-like structure on the distal end of the elongate body.

68. (Previously Presented) An assembly for delivering a conduit to a heart wall between a heart chamber and a coronary vessel, the assembly comprising:

a sleeve configured to be inserted through an anterior wall and a posterior wall of the coronary vessel, the sleeve having a first end, a second end, and an engagement member on one of the first end and the second end; and

a dilator configured to be advanced from the sleeve for carrying the conduit to the heart wall and delivering the conduit in the heart wall,

wherein the engagement member is configured to engage with an interior of the coronary vessel so as to distend the vessel.

69. (Previously Presented) The assembly of claim 68, wherein the engagement member has a bulbous configuration.

70. (Previously Presented) A kit for delivering a conduit into a heart wall between a heart chamber and a blood vessel, the kit comprising:

a hollow needle;

a guidewire configured to be inserted through the hollow needle;

a dilator configured to be advanced over the guidewire and into the heart wall;

and

a conduit configured to be placed over the dilator for delivery into the heart wall.

71. (Previously Presented) The kit of claim 70, wherein the needle comprises an access port near a distal end of the needle configured for insertion into the heart and

a portion in flow communication with the access port near a proximal end of the needle such that blood is capable of entering the access port and being observed at the portion.

72. (Previously Presented) The kit of claim 70, wherein the needle has graduated markings on an external surface thereof.

73. (Previously Presented) The kit of claim 70, wherein the dilator is configured as a sleeve.

74. (Previously Presented) The kit of claim 70, wherein the conduit comprises screw threading on an external surface thereof.

75. (Previously Presented) The kit of claim 70, wherein the hollow needle is configured to measure a depth of insertion of the needle.

76. (Previously Presented) The kit of claim 70, wherein the hollow needle is configured to be inserted through the coronary vessel and the heart wall and into the heart chamber.

77. (Previously Presented) The kit of claim 76, wherein the hollow needle is configured to be inserted through an anterior wall and a posterior wall of the coronary vessel.

78. (Previously Presented) The kit of claim 71, wherein the portion is an opening.

79. (Previously Presented) A kit for providing direct blood flow between a heart chamber and a coronary vessel, the kit comprising:

a guide device configured to be inserted through an anterior wall and a posterior wall of the coronary vessel and through a heart wall between the heart chamber and the coronary vessel;

a first mechanism configured to form a passageway in the heart wall at a location defined by the guide device, the first mechanism being deliverable via the guide device;

a conduit configured to be placed within the passageway; and

a second mechanism configured to place the conduit within the passageway,

wherein the first mechanism and the second mechanism are configured to be delivered via the guide device.

80. (Previously Presented) The kit of claim 79, wherein the first and second mechanisms are configured to be delivered via the guide device to the heart simultaneously.

81. (Previously Presented) The kit of claim 79, wherein the first mechanism is configured to be delivered to the heart and the second mechanism is configured to be delivered to the heart after removal of the first mechanism from the heart.

82. (Previously Presented) The kit of claim 79, further comprising a measurement device configured to measure a distance from the anterior wall of the coronary vessel to the heart chamber.

83. (Previously Presented) The kit of claim 79, wherein the guide device is a guidewire.

84. (Previously Presented) The kit of claim 79, further comprising a sheath configured to be inserted into the passageway.

85. (Previously Presented) The kit of claim 84, wherein the conduit is configured to be inserted into the sheath to place the conduit in the passageway.

86. (New) A transmyocardial implant assembly, comprising:
a conduit for defining a blood flow path from a heart chamber to a coronary vessel, the conduit having a first end, a second end, a flexible portion and a rigid portion, the flexible portion including the second end which is sized to be received within a lumen of the coronary vessel, the rigid portion including the first end and sufficiently rigid to remain open during systole of a heart, the rigid portion sized to be inserted through and retained within a heart wall,

a sheath including an outer wall defining an inner diameter, at least a portion of the conduit releasably held within the inner diameter of the sheath; and

a tool extending within the sheath that is releasably attached to the second end of the conduit.

87. (New) The transmyocardial implant assembly according to claim 86, wherein the second end of the conduit comprises an auto-anastomosis device.

88. (New) The transmyocardial implant assembly according to claim 87, wherein the autoanastomosis device is movable between an expanded orientation and a compressed orientation, has a resilient construction that biases the auto-anastomosis device toward the expanded orientation, and is adapted to be secured to the coronary vessel when in the expanded position.

89. (New) The transmyocardial implant assembly of claim 88, wherein the auto-anastomosis device includes at least one flange to mechanically engage a wall of the coronary vessel to secure the second end of the conduit to the coronary vessel when the autoanastomosis device is in an expanded orientation.

90. (New) The transmyocardial implant assembly according to claim 86, wherein the conduit, sheath, and tool are a part of a kit.